

CUBASE

audio

for Windows

DR-8/16

Hardware Specifics

Steinberg

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Introduction

Welcome to the Cubase Audio XT Akai DR-8/16 On-line supplement!

Please use one of the methods described below to quickly find the desired information:

- Use the Table of Contents provided by the Adobe Acrobat Reader program.
- Use the Adobe Acrobat Reader Search function.
- Click on a cross-reference (green text) to jump to the respective topic.

It is of course possible to print out this document or parts of it.

Additional Information on how to use the Adobe Acrobat Reader program can be found in its on-line Help.

About Cubase Audio for the DR-8/16

As you probably already know, the DR-8/16 is a stand-alone hard disk recorder from Akai. It already features functions such as recording, editing and mixing. So why use it with Cubase? There are a number of reasons:

- Integrated MIDI and audio recording.
- Easy to use audio editing, with extremely powerful functions making full use of the graphic Windows environment.
- Advanced DSP functions such as time stretch and pitch shift.

- Full mixing capabilities, including automation of volume, pan, sends and EQ.
- Audio file transfer between computer and DR-8/16 unit.
- The ability to chain any combination of DR-8/16 units, up to a total of 64 audio tracks!

If you have used the DR-8/16 as a stand-alone unit, you will note that integrating it with Cubase introduces some changes. Some functions in the DR-8/16 are replaced by functions in Cubase. You can still do everything you're used to, it just means some things are handled differently.

Naming - Channels vs Tracks

In Akai-speak, a channel is something that carries an audio signal in the DR-8/16's internal mixer. A track is something you record audio onto. The DR-8 for example has a number of input-, output- and bus-channels plus 8 tracks.

Unfortunately, this is different from the way the terms and tracks and channels are used in Cubase. In Cubase, a channel is actually more like a track in the DR-8/16. When you use Cubase with the DR-8/16, you have access to eight audio channels, each one corresponding to a track in the DR-8/16.

Tracks in Cubase are practically unlimited. They are just “rails” for your “audio hangers”, the Parts. Any Track can be set to play back on any channel. You can even have two Tracks set to the same channel!

In this document, we will use the Cubase meaning of the words channels and tracks.

What this document contains

This supplement to the Audio Recording book describes the differences in audio recording with Cubase or Cubase Score and Cubase Audio XT with a DR-8/16 system.

If you find any discrepancies between the main Audio Recording book and this document, it is this document you should rely on, since using Cubase Audio XT with the DR-8/16 is slightly different from other versions.

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- This addendum assumes you are familiar with handling Cubase in general. Below follow only brief explanations of many procedures that are common to all Cubase Audio versions. Please refer to the main manuals for the details.
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Requirements

The following equipment is needed, in addition to what is needed for MIDI recording:

Computer

- For audio recording, the minimum computer required is a 486DX 50 MHz, with 8 MByte of RAM and a VGA monitor.
- Our recommended system is a Pentium, 133 MHz, 16 MByte of RAM and a monitor displaying 800x600 pixels in 256 colors (or better).

DR-8/16s

You can use Cubase with practically any combination of DR-8s and or 16s. *Each* unit must be equipped with the following (the boards mentioned below are *not* included in “basic” DR-8/16s):

- Operating System Version 2.00 or later.
- At least one internal SCSI hard disk.
Up to eight hard disks can be connected to each unit. Cubase has full support for multiple hard disks. In the Akai documentation that comes with the DR-8/16 you will find information on recommended drives and a checklist for purchasing hard disks.

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- Please note that the hard disks are connected to the SCSI-A port(s).
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- A IB-801S SCSI-B interface board.
The main data transfers between the computer and the Akai unit happen via SCSI and uses the SCSI-B port. You can not connect your Akai recorder(s) to the computer via the SCSI-A port(s).
 - A IB-803M MIDI interface board.
MIDI is used for sending short control commands to the AKAI recorder(s) and for synchronization.
 - If you have more than one DR-8/16, you will need one or more Akai AL-X50 remote cables, for connecting the units.

SCSI

- You need a at least one “SCSI Host Adapter” for your computer.
This card, which adds a SCSI interface to your computer, must be “ASPI compatible”. ASPI is a standard for SCSI on PC computers, established by Adaptec. While other manufacturers make ASPI compatible SCSI cards, staying with an original Adaptec card minimizes the risk for incompatibility problems.

-
- SCSI on the PC is a critical issue. Make sure you get a true and tested combination of card and driver for your particular computer! It's definitely worth the money to spend an extra few dollars on a high quality card with a solid driver!
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- You will need at least one SCSI cable, the exact specifications depending on your SCSI card.

MIDI

- The MIDI out of one of your Akai units (the one designated to be the "master recorder", see [page 12](#)) *must* be connected to a *separate* MIDI Input on the computer.
This more or less requires that you have one multi-port MIDI interface or a number of single-port ones, since you will very likely have other MIDI equipment that you want to connect to the computer, for example a MIDI keyboard.
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- We do not recommend you to use a MIDI merger for this purpose.
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- If you have more than one DR-8/16, the optimal solution is to have a separate MIDI input for each one, but this is not a requirement.
See [page 14](#) for connection details.
 - You will need at least two MIDI cables.

Installation

To install the DR-8/16 hardware and Cubase Audio, proceed as follows:

Preparations

First go through the following steps in the Installation chapter in the getting Started book:

- Windows 95
- Getting the Computer ready
- About Printers
- Installing the Copy Protection key
- Installing the MIDI Interface/synthesizer driver
- Connecting the MIDI Equipment

Installing SCSI in the computer

Cubase works with any SCSI host adapter that is 100% “Adaptec compatible”.

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- We strongly recommend that you use original Adaptec cards if at all possible. Small deviations in SCSI implementations can cause transfer problems.
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When you install the SCSI Host Adapter (as described in the documentation that came with it), please note the following points:

Connections

Do not connect anything to the SCSI card until you have finished installation of the card and its driver!

Base Addresses and IRQ

Just like a MIDI interface, the SCSI host adapter will have a base address and an IRQ setting. Make sure that no two cards in your computer use the same base address or IRQ, or the computer will not run properly! For example, some Adaptec cards default to base address 330, which is also the standard for regular MPU MIDI cards. In this case, you must move either the SCSI or the MIDI card to another base address!

If you use Windows 3.1 or 3.11

Windows 3.1 and 3.11 have no built in support for SCSI cards. If you run any of these Windows versions you need an “ASPI for DOS” or “ASPI for Windows” driver.

With some cards this software has to be purchased separately. Adaptec’s “ASPI for DOS” driver, for example, is part of a package called “EZ-SCSI” which is only sometimes included with the card.

The ASPI driver is required for Cubase to communicate via SCSI under Windows 3.1 or 3.11. You cannot run the card with the driver that is in BIOS ROM.

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- Be sure to use any diagnostic utilities included with your ASPI version to verify that the card and its driver have been installed properly, before you start using the card with Cubase!
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Selecting a master Akai unit and setting SCSI IDs

- If you have more than one DR-8/16, you need to designate one to be a master and all others to be slaves.
This is the same as when using the DR-8/16 without Cubase. The actual setting is done with dip switches on each unit, see the Akai operation manual for details.
 - Each DR-8/16 must be set to a unique SCSI ID.
This is also done with DIP switch settings on the actual machine, see the Akai operation manual for details. Please note that this ID is only for the SCSI-B port. It has nothing to do with the SCSI hard disk IDs, since they are connected to the SCSI-A port. Also note that the SCSI host adapter is most likely set to SCSI ID number 7, and no Akai unit can therefore be set to this number, since each device on a SCSI chain must have a unique ID.
-
- It is not recommended to change Master settings and SCSI IDs after starting to work with Cubase Audio. These settings are stored with each Cubase Song and are used by the program for identifying the machines. Loading a Song after changing these settings will lead to confusing results!
-
- The last DR-8/16 in the SCSI chain should have SCSI termination activated, and all other units should have termination deactivated.
If you have only one DR-8/16, it should have termination activated. Again, this setting is done with DIP switches on the actual Akai units.

Using multiple SCSI host adapters

If your system requires, you *can* use multiple SCSI cards, and have on or more DR-8/16s connected to each card. If you do, please note that only the units connected to each SCSI card will have to have unique SCSI IDs, and the last device on each SCSI chain should have its termination activated.

Unit Numbering

A certain numbering system is used to identify the various DR-8/16 units in the system. This is then used for some operations, such as channel numbering and is therefore important to observe.

- The Master always has number 0 (zero). If you only have one DR-8/16, this is the only number you will ever see.
- The slave units are numbered according to their SCSI numbers. The slave with the lowest SCSI number will be number 1, the second lowest will be number 2 etc. If you for example have three slaves set to SCSI IDs 2, 5 and 7, they will be identified as slaves 1, 2 and 3 respectively.

The slave number is displayed on the DR-8/16 front panel at the end of the bootup sequence.

Connections

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- Before you make any connections, make sure that all your equipment is switched off !
-

SCSI

1. Connect the SCSI on the computer, to the SCSI-B port on the master recorder.
2. Connect the SCSI -B connector on the master, to the SCSI-B connector on the first slave.
3. Continue connecting all slaves to the SCSI chain, in the same manner.

MIDI

1. Connect a MIDI Output on the computer to the MIDI Input on the master Akai unit.
2. If you have more than one DR-8/16, either connect the remaining units to a separate MIDI Output each, or use the MIDI Thru connectors on each DR-8/16 to create a "daisy-chain" MIDI connection.

3. Connect the MIDI-Output on the master Akai unit to a MIDI In on the computer.
4. If you have more than one DR-8/16, you can connect the MIDI Output of each remaining unit to a separate MIDI In on the computer.
While this is not necessary, it will improve the speed of some operations that happen via MIDI, such as getting information about a file, finding out how much recording time is left on the DR-8/16 hard disks, etc.

AL-X-50

1. If you have more than one DR-8/16 you must connect them all together using AL-X50 remote cables (see chapter 14 in the AKAI operation manual for details).

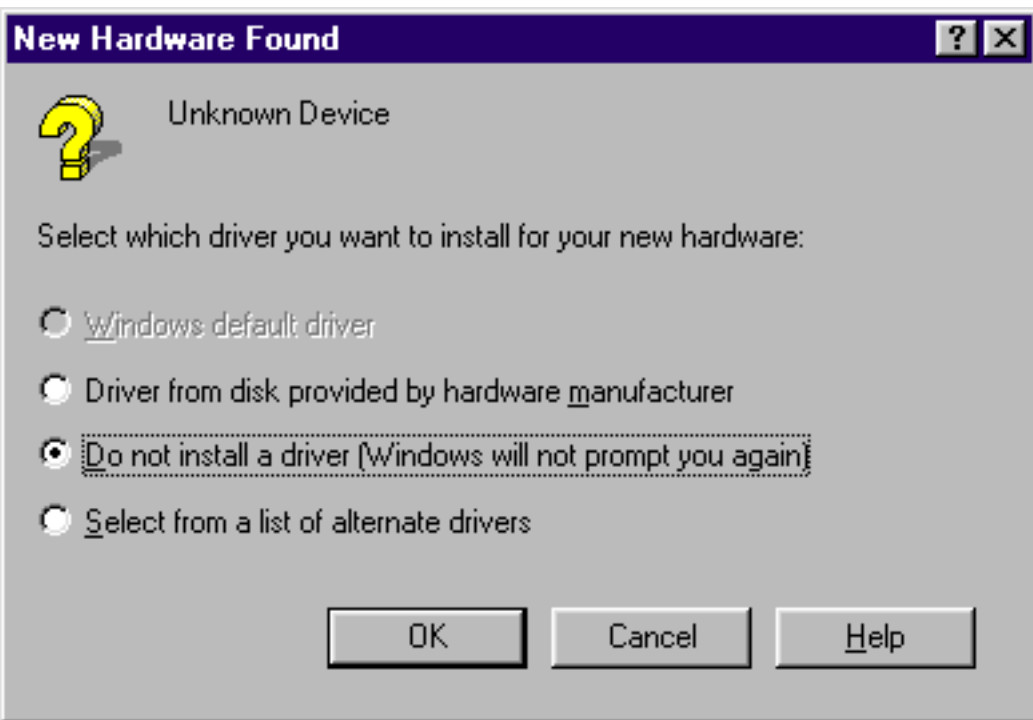
Audio Connections

For all references to audio connections, we refer to the DR-8/16 documentation.

Booting up

1. Turn on all hard disks and other computer peripherals.
2. Turn on the slave Akai recorders (if any).
3. Turn on the master Akai recorder and wait until all machines have finished booting.
4. Turn on the computer.

If you use Windows 95 a message will be displayed on the computer screen saying that new hardware has been detected:



5. If the above message appears, please select 'Do not install a driver' and click OK.

Verifying SCSI Communication with the DR-8/16

We recommend that you check that all DR-8/16s appear properly on the SCSI bus, before proceeding:

ASPI for DOS

If you have ASPI for DOS installed and turn on your computer, the SCSI host adapter software is able to list all recognised SCSI devices and their SCSI IDs. If your card doesn't do this, you will have to make a change in your CONFIG.SYS file (add a "/D" switch to the device line that installs ASPIxDOS, where the "x" is any number.) Please check the instructions that came with the SCSI host adapter card, if in doubt.

ASPI for Windows

If you run ASPI for Windows, you can use the utility "SCSI Interrogator" (or equivalent) to check that the Akai devices appear on the SCSI bus.

In case of problems

If any device does *not* appear, please check the following points:

- Did you set up termination properly?
- Are all devices set to unique SCSI IDs?

Installing Cubase Audio XT

1. Go back to the Getting Started book and perform the first seven steps in the section “Installing the software” on page 25.
If you later need to switch to another hardware system, see [page 22](#).
2. Continue from step 8 on page 26 in the Getting Started book.

Launching and making MIDI Settings

Again, please return to the Getting Started book’s Installation chapter and perform the following steps:

- Start Cubase!
The DR-8/16 will be automatically be detected and set up to work correctly, when you launch Cubase. When the connection to all machines has been confirmed, a picture of DR-8/16 will be displayed on the screen and the record lights on the DR-8/16(s) will flash. Any problems detected during this process will be displayed as error messages (see [page 95](#)).

Finally, perform the following steps from “Getting Started”:

- Checking MIDI Interface Installation
- Saving the Settings

Making Audio Settings

In Cubase, select “Hardware Setup” from the Audio menu and set the dialog as follows:

Setting:	Description:
Sample Frequency	Set this to 44.1 or 48kHz for CD or DAT audio quality, respectively. If you plan to use the digital inputs/outputs, it is important to match this setting to the connected equipment.
Sync	Set this to the frame rate normally used for video in your part of the world. Europe uses 25 fps and the U.S. normally uses 29.97 dfps, for television-related work.
Quick images	Leave this deactivated for best waveform image detail. If you find the time it takes to create the waveforms annoying, activate it.
Mixer display swapping	If this is on, the DR-8/16 display will show level and pan settings you make in Cubase, graphically.
Enable front panel	Leave this off for now. For more details, see page 58 .
Akai recorder as remote	Leave this off for now. For more details, see page 58 .

Setting:	Description:
Recorder and Record Disk	<p>If you only have one DR-8/16 and one disk you don't need to worry about these settings at all.</p> <p>If you have one DR-8/16 but several disks, use the "Record Disk" pop-up to select which of the disks that should be used for re-cording.</p> <p>If you have several DR-8/16 and several disks, us the pop-ups to select each unit in turn (Recorder) and for each unit, a disk to record on (Record Disk).</p>
Info	<p>This button a provides you with some information about the selected disk.</p>

Where do I Go Next?

Now, please proceed to the Audio Recording book included in this package. For differences between Cubase (Score) and Cubase Audio XT, see the following text.

Switching to another Audio Hardware System

If you later want to run Cubase Audio XT with some other audio hardware than the one specified at installation, there are two ways:

By re-installing

This is the safest and simplest way. Simply re-install the program, and specify the same destination directory. For files you might have changed, like the def.all startup Song, you will be asked if you want to keep the version already installed or install a new one.

By changing the cubaseda.ini

This is the more advanced option.

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- If you don't feel confident about changing the "cubaseda.ini" file, please use the reinstall method described above.
-

In your Cubase Audio XT directory you will find a folder called “audio”. Inside this is *one folder for each* of the audio hardware systems that Cubase Audio XT supports. Inside each of these folders is a file called “adevice.dll”. Which audio hardware the program uses depends on which of these “adevice.dll” files that is loaded on startup.

The instruction on which file to load is found in the “cubaseda.ini” file. If you change this, Cubase Audio XT will use another system.

Proceed as follows:

1. Make sure Cubase Audio XT is not running.
2. Open a text editor, for example Notepad.
3. Locate and open the file “cubaseda.ini”, located in your Cubase Audio XT folder.
4. Locate the PREFS section.
5. Change the path on the “AudioPrefs=” line so that it points to the directory corresponding to the audio hardware you now want to use.
6. Save the file.
7. Launch Cubase Audio XT.
Providing the path is typed in correctly, the other hardware will now be used.

About Audio Channels

The DR-8/16 is an multi channel system, that is, 8/16 different recordings can be played back at the same time. You can also record on up to 8/16 channels (“tracks” in “Akai-speak”) simultaneously. Each channel is monophonic, that is it can only play back one mono recording. For a stereo recording you need to use two channels, see [page 35](#).

Channels and Multiple DR Units

If you have more than one DR-8/16, the channel numbers will be consecutively numbered starting with the master and continuing with the slaves in numerical order. If you for example have a DR-16 as master, a DR-8 as slave 1 and a DR-16 as slave 2, the channels in each machine will correspond to Cubase channels as follows:

Akai Unit:	DR Channel ("track"):	Cubase Channel:
Master DR-16	1 to 16	1 to 16
Slave 1 DR-8	1 to 8	17 to 24
Slave 2 DR-16	1 to 16	25 to 40

One Track Recording

Preparations

For basic recording, we recommend you perform all operations from Cubase, and do not touch the DR-8/16 front panel. To ensure you do not change anything accidentally on the DR-8/16, we recommend the following steps:

1. Select Hardware settings from the Audio menu.
2. Make sure Enable front panel is *not* activated.
3. Click OK.

Input 1+2 Assignment – Using the Digital Inputs

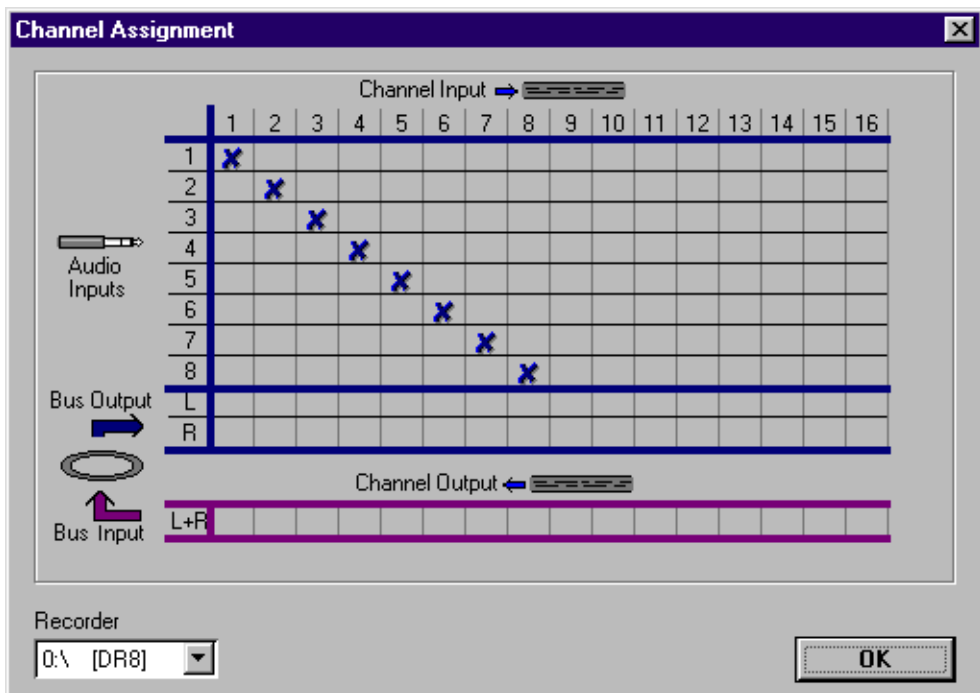
The signals coming in to Input 1 and 2 (see below) are normally received from the analog 1 and 2 connectors. However, if you want to record digital audio signals, open the Routing dialog (found on the Options menu) and select from the “Input 1+2” assignment options:

Option:	Description:
Analog	Analog Inputs 1 and 2 are used.
Digi XLR	The AES/EBU compatible XLR Input is used.
Digi RCA	The S/PDIF compatible RCA Input is used.

Channel Assignment

Audio input routing is handled as follows:

1. Select "Channel Assignment..." from the Audio menu.
A window appears which allows you to connect audio inputs to Cubase recording channels.



The Channel Assignment window.

2. If you have several DR-8/16 units, select the one for which you want to make settings, from the "Recorder" pop-up at the bottom of the dialog.

3. To set up the connections, click in the “grid” made up by the rows and columns.
 - The rows correspond to physical “tracks” on your DR-8/16(s), as listed in the number column at the far left.
 - The main columns correspond directly to the audio channels in Cubase Audio XT. If you for example route an input to “Audio Channel 3”, it can be recorded on a Track set to Channel (Chn) 3 in the Arrange window.

Bus Output and Input

These items are used for “bouncing” several audio channels to one or two, see [page 40](#).

Specification of Recording Files

Automatic

If you don't do anything else, Cubase will create new files for you as you record, according to the following specifications:

- The number of the channel is used to determine which DR-8/16 will be used, as described on [page 24](#).
- For automatically created files, the hard disk with the lowest SCSI ID is used by default. This is true until you manually select another disk. Then this disk is used instead.
- The file is named using the following formula: $Rr-c-t$, where "R" is the letter "R", "r" is the recorder number, "c" is the channel ("track") number and "t" is the take number. If you for example make the tenth recording on channel 3 of the master unit (number 0), the file will be called "R0-3-10".

Manual

If you wish, you can at any time manually specify the file's name and location prior to recording:

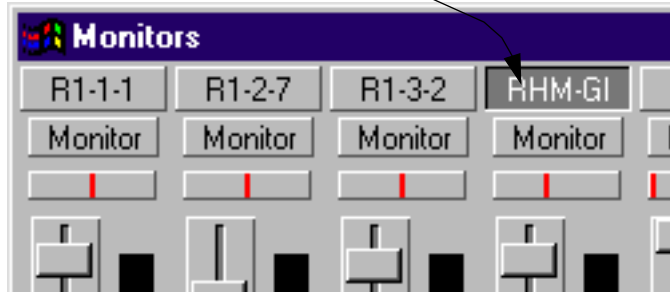
1. Open the Inspector or the Monitor window, and click the "Filename" button that corresponds to the channel you plan to record on. Either way, a special Akai file dialog appears, where you can specify a name and location for the file.

A file set up for recording as displayed in the Inspector and in the Monitor



The Inspector window displays the following information:

- File Name: RHM-GIT
- Rec Chn Mode: Mono
- Free Space: 57:32
- Monitor button



The Monitors window displays a grid of recording channels. The first four channels are labeled R1-1-1, R1-2-7, R1-3-2, and RHM-GI. Each channel has a Monitor button and a level indicator. The RHM-GI channel is highlighted with a red vertical bar.

2. If you have more than one hard disk connected to the Recorder, select the disk you want to record on, from the Hard disk list.
3. In the File name field, specify a name for the recording.

The following rules apply to names:

- File names can be up to eight characters long
- The characters "?" and "." are not allowed.
- The name must *not* begin with "~", "#", or " " (space).

-
- The DR-8/16 does not use directories or folders. All files are saved on the “root level” of the hard disk.
-

Available disk space

In the Inspector, you can always see how much free disk space you have left, in minutes. Please note that this only shows the available recording time for the “Recorder” and disk currently selected, not for all disks in the system. To switch to another disk, use the Manual file specification methods as described above.

Monitoring

As described in the DR-8/16 manual, the Channel Rec parameter on the DR-8/16 control monitoring. In Cubase, Channel Rec is controlled via the Monitor button in the Inspector. This can be done independently for each Track, in two ways:

- Select a Track and click the Monitor button in the Inspector.
- Click the corresponding Monitor button in the Monitor window.

Monitoring works as follows:

- In stop mode, you will hear the Input signal if Monitor is activated and nothing at all if Monitor is deactivated.
- While recording, you will always hear the Input signal for that channel.
- While playing back you will always hear what is recorded on the Track.

For further reference, see the Monitoring descriptions in the DR-8/16 documentation.

Recording Levels

For all references to recording level adjustments, see your DR-8/16 manual. However, please note that when monitoring is activated, the signal passes through the A/D and D/A converters on the DR-8/16, which means you can listen to the output of the unit to check for any degradation in signal quality due to improper levels.

Performing the actual Recording and Punch In and Out

Recording audio with the DR-8/16 is done just as with MIDI. For example, all the methods available for punch in and out apply.

About Waveforms

Two settings determine what kind of waveforms you get in the Parts, in the Pool and in the Audio Editor:

- If Use Waveforms on the Audio menu is *disabled*, you don't get any waveforms at all. However, you can at any time create waveform images for the file you have already recorded, see the main Audio manual for details.
- If Use Waveforms is enabled on the Audio menu, you will get waveforms.
- If "Quick Images" is also activated in the Hardware Setup dialog, these waveforms will appear quickly, but will have less detail.
- If "Quick images" is *disabled*, Cubase generates waveforms with high amount of detail. However, this is done after each recording and requires some processing time (a progress dialog appears).

Cycled Recording

Cycled recording is supported with the DR-8/16, but only the first "lap" is recorded.

Stereo Recording

The DR-8/16 is essentially a mono system, that is each channel (“track”) can only play back a mono recording. A stereo recording therefore occupies two channels. To record in stereo, proceed as follows:

Setting up the DR-8/16

1. Connect the stereo source to two inputs.
 2. Open the Input Routing dialog and set things up so that the two inputs are connected to two adjacent channels
As an example, let's say you use channel 3 and 4, or channel 7 and 8.
 3. Select a Track and set it to the first channel you plan to record on.
In the examples above that would be channel 3 or 7, respectively.
-
- You can not record stereo on the highest channel of each DR-8/16 unit.
-
4. Make sure the two channels are not “occupied” (already used) at the position in the Song where you plan to record.
If either channel is accidentally occupied by another recording, that recording will be cut off when the stereo recording starts.
 5. Switch the Channel Mode setting in the Inspector, to Stereo.

Performing the Recording

1. Set up a file for recording.
2. Activate recording as usual.
The signal is actually recorded into two mono files, but these are from now on treated as one stereo pair.

Editing Stereo recordings

Since stereo recordings are two linked files that always play back on two adjacent channels, they appear as one event with two audio curves in it, in the Audio editor. The two channels share one volume curve.

-
- This event occupies two channels - the one it resides on and the next!
-

Apart from this fact, editing stereo recordings is nothing different from editing mono recordings.



A stereo recording, residing on lane 1, but actually occupying channels 1 *and* 2.

Stereo recordings and channel assignments

- You can set up a stereo event to play from any channel but *the highest numbered* one on each DR-8/16 unit. If you for example have one DR-8, stereo events can be played back from channels 1 to 7 but not from channel 8.
-
- Do not overlap stereo and mono events since it will lead to suddenly muted events during playback. There are no restrictions in Cubase preventing you from creating such a situation, so you should take special care if you use both mono and stereo events in the same Song.
-

Multi Track recording

Multi Track recording can be performed as described in the Audio Recording book. The following rules apply:

- You must set each Track you want to record on, to a different channel number and you must activate recording in the “R” column for each of the Tracks.
- You can mix mono and stereo recordings, as long as no recordings use the same channels. If you for example make a stereo recording on channel 3, it will occupy channel 3 and 4. You can therefore not record on channel 4 while recording in stereo on channel 3.

In either case (mono or stereo), monitoring and actually recording is done as with single Track recording.

Recording from the “Bus” – Bouncing

You can mix down many audio recordings into to one single audio file, mono or stereo. This is done using the DR-8/16’s Bus function.

Let’s say you run out of audio channels, but you still need to record more. If you for example have recorded background vocal harmonies, you could probably do a bounce of all the background vocal tracks and instead use this composite recording in the final mix. The Tracks (channels) previously used for all the background vocals can then be used for adding new instruments.

If the mixdown (the “bounce”) should be in stereo, up to six channels can be bounced. If the mixdown should be in mono, up to seven channels can be bounced.

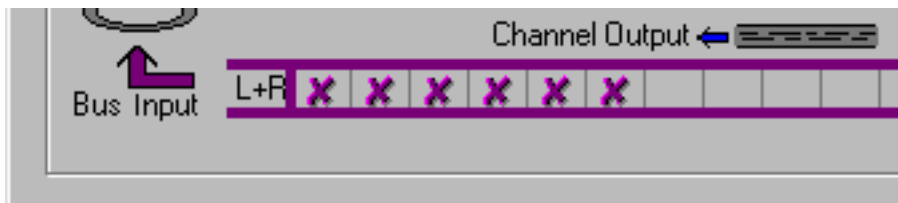
In the following text we will call the originally recorded Tracks *source Tracks* and the Tracks you “bounce to”, *destination Tracks*. Proceed as follows:

Setting Up the Source Tracks

1. Record all the source Tracks.
2. If you want to apply EQ separately to the source Tracks, set this up so that they play back as intended.
3. If you want to create some special (maybe dynamic) mixing, that you want to be part of the destination Track(s), set this up for the source Tracks, as desired.
For details on EQ and automation, see later in this manual.
4. If the destination should be in stereo, adjust panning.
5. If the destination should be in mono, adjust the panning of all source Tracks so that they play back on one side of the stereo image only.
In other words, pan them *all* hard left *or* right depending on the destination audio channel, see below.

Routing the Source Signals to the Bus

1. Open the Channel Assignment dialog.
2. For the channels you want to include in the bounce, click in the “Bus Input” fields at the bottom of the dialog.
This will route all these audio channels to the internal stereo bus in the DR-8/16.



In the example below, channel 1 to 6 are routed to the bus.

3. Close the dialog.
You have now set up everything concerning the source Tracks.

Setting Up the Destination Tracks

You have three options for the destination Tracks:

- Using one mono Track.
This will then record *either* the left or the right channel of the bus.
- Using two mono Tracks.
These will then each record the left and right sides of the bus, respectively.
- Using one stereo track.
This will then record both the left and right sides of the bus.

Proceed as follows:

1. Set up one or possibly two destination Tracks for recording.
This involves specifying files, setting the Mono/stereo switch correctly, etc.
Please observe the following:
 - Do not set the destination Track(s) to the same channel number as any of the source Track(s).
 - If you are recording on two mono Tracks you must activate Multirecord and set both Tracks to record mode.

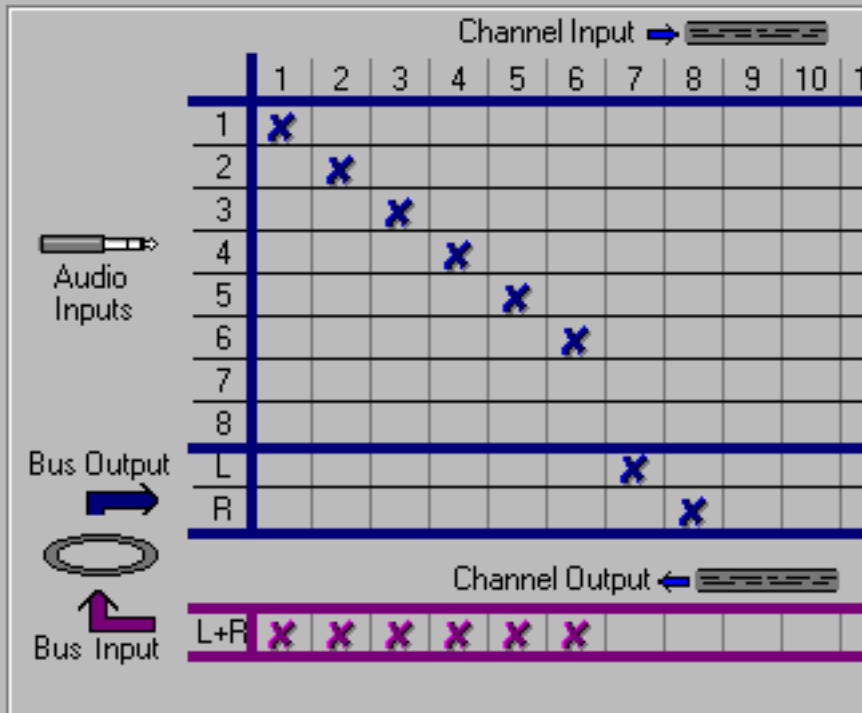
- If you are recording in stereo, you can not record on the highest numbered channel of a recorder.

A	M	C	Track	Chn	Out
		↶	BVoX LoL	1	AK
		↶	BVoXMidL	2	AK
		↶	BVoXHiL	3	AK
		↶	BVoXLoR	4	AK
		↶	BVoXMidR	5	AK
		↶	BVoXHiR	6	AK
		↶	BVoXStereo	7	AK
		↶	Audio 8	8	AK

In this example, the first six Tracks will be recorded onto the Track “BVoXStereo”.

2. Open the Channel Assignment dialog and click in the grid so that “Bus Output L” (the left side of the bus) and “Bus Output R” outputs are connected to the channels that you plan to record on.
 - If you record on one mono Track you only need to specify a channel for either “L” or “R”.
 - If you are recording two mono Tracks, you need to specify both as connected to the Bus Output.
 - If you are recording in stereo, you also need to specify two channels. The recording will use the Track it is set to and the next, as with all stereo recordings (see [page 35](#)).

Channel Assignment



In this example, "Bus Output L" will be recorded on channel 7 and "Bus Output R" will be recorded on channel 8. If this destination Track was set to channel 7 and stereo, both channels of the Bus Output would get recorded on this Track.

3. Close the dialog.
4. If you want to do the bounce as an automatic punch in/out, set up the Left and Right Locator and activate In and Out on the Transport Bar.

Recording!

1. Perform the recording on the destination Track(s).
2. Mute all the source Tracks and possibly also the Mixer Track that adjusted their volume, panning etc.
3. Play back the destination Track.

You can – if you like – now delete the source Tracks and their audio files. However, you might just as well keep them in the Arrangement, muted, if you have enough hard disk space to hold the files. This will allow you to later go back and redo the bounce, if needed.

Please note that bouncing *one* Track to another is a way to make an EQ setting, or for example a dynamic volume change, an integral part of the audio file.

Output Assignment - The Routing Dialog

The Routing Dialog, opened from the Audio menu, allows you to set up the routing for various outputs on the DR-8/16:

Digital Outputs

The stereo mix from the DR-8/16 mix is always transmitted to both the analog and the digital outputs. However, you can use the controls in the Digital Outputs section of the Channel Assignment dialog to determine *which* of the digital outputs are used, the XLR (AES/EBU) or RCA (S/PDIF) variation.

Send 1 and 2

This section allows you to set if the Send 1 and 2 outputs should be pre- or post-fader. See the Akai operation manual for details.

Aux Send

Here you can select if the Sends should operate in mono or stereo. See the Akai operation manual for details.

Output (Assignment)

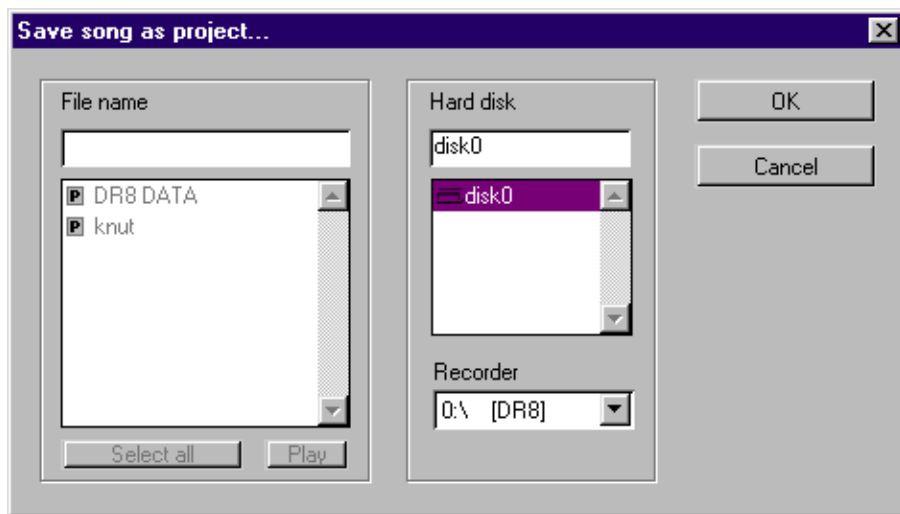
This option is only available for the DR-16. It allows you to switch between the DR-16's two Output Assignment modes, MULTI and MIX. See the Akai operation manual for details.

File Handling

The big difference in file handling in a DR-8/16 system, compared to using Cubase with a sound card, is that the audio files are not stored on the PC hard disk at all, but on the special DR-8/16 hard disk(s). This has a few implications:

- Backing up and archiving audio files is performed using DR-8/16 methods and utilities, not via Cubase Audio.
- If you want to play the Songs with another version of Cubase Audio, the audio files must be copied from the DR-8/16 hard disk to a computer hard disk.

The DR-8/16 file dialog



Since you will often access files on the DR-8/16 hard disk(s) and these files do not follow normal DOS or Windows conventions, Cubase has a special file dialog for the DR-8/16. This will appear in the following cases:

- When you specify a file for recording (see [page 30](#)).
- When you import files into the Pool (see the main Cubase manual).
- When you transfer files between the computer and the DR-8/16 (see [page 54](#)).
- When you save a song as a DR-8/16 project (see [page 91](#)).
- When you delete files on a DR-8/16 hard disk (see [page 93](#)).

- When a file can not be found when you load a Song (see the main Cubase manual).

The file handling in the DR-8/16 is different from DOS/Windows file handling in the following aspects:

- There are no folders or directories, all files are laid out in a “flat structure” on the disk.
- File names are case sensitive, that is “LeadVox” and “leadvox” are considered to be two different files.
- File names can be up to eight characters long
- The characters “?” and “.” are not allowed.
- Names must not begin with “~”, “#” or “ ” (space).

The Cubase DR-8/16 file dialog provides the following functionality (not all features are applicable in all cases):

- You can specify any of the “Recorders” you have in your system, that is, any of your DR-8/16 units.
- When you have selected a “Recorder”, you can use the disk list to select any of the hard disks connected to that “Recorder”.
- The file name list and field allows you to select files (when loading) and specify file names (when saving).
- In the file list you can see if a file is in stereo (🔊) or mono (🔊).
- The selected file can be played by clicking the Play button. To stop playback before the file ends, click the same button again.

- When importing or loading, you can select more than one file by holding down [Shift] when clicking in the file list. You can also select all files on the disk by clicking on the "Select all" button.

Audio Editor Differences

The only difference between the Audio Editor when using Cubase Audio XT with the DR-8/16, compared to using Cubase/Cubase Score with audio cards, is the stereo handling, which is described on [page 35](#).

Importing and Exporting Audio files

There are three import/export operations available:

- Importing files from the DR-8/16 hard disk into the Pool.
This allows you to use any file recorded with the DR-8/16, in a Cubase Song.
- Transferring audio files from the PC hard disk to the DR-8/16 hard disk.
This allows you to use files created in other programs, in your Cubase Song.
- Transferring files from the DR-8/16 hard disk to the PC.
This allows you to use files recorded on the DR-8/16, in other programs.

Importing DR-8/16 files into the Pool

The “Import Audio File” command is found on the File pop-up in the Pool. It allows you to add files to the Pool that were created in other Cubase Songs or with the DR-8/16 as a stand alone recorder (files that already reside on the DR-8/16 hard disks). You can then drag these files from the Pool into your Arrangement for use in Tracks and Parts.

The “Import Audio File” command is described in the main Cubase Audio manual. The only difference in this version is that the DR-8/16 file dialog appears. This is described on [page 50](#).

Transferring files from the PC to the DR-8/16

If you have audio files on your PC hard disk(s), these can be copied to any DR-8/16 hard disk and are at the same time added to the Pool.

The following file formats are supported:

- Wave (WAV) and AIFF.
- Mono and stereo
- 8 and 16 bits. However, 8 bit files will be converted to 16 bits during the transfer.
- Various sample rates. However, some files will be sample rate converted during the transfer, according to the table below.

PC File sample rate:	Converted to:
48 kHz	No conversion
44.1 kHz	No conversion
32 kHz	No conversion
44.056 kHz	No conversion
22.050 kHz	44.1 kHz
11.025 kHz	44.1kHz

-
- Please note that a file with a sample rate that doesn't match the sample rate of the current Song will play back at the wrong speed and pitch when used in Cubase!
-

To transfer the file, proceed as follows:

1. Select "Import Audio File" from the File pop-up menu in the Pool.
The DR-8/16 import dialog appears.
2. Click the "Import from PC" button.
A standard Windows dialog appears instead.
3. Locate the file.
Cubase adds an "Info" button to this dialog, that provides information about the selected file. Use this to check that the file format is valid for importing.
4. Select one file and click OK.
A DR-8/16 save dialog appears.
5. Select the "Recorder" (DR-8/16 unit) and hard disk, that you want to save the file onto.
6. If you like, change the name.
The original "PC" file name is suggested by default.

7. Click OK.

The file is copied, which may take some time. A progress box shows how much of the file has been transferred. After this, the file appears in the Pool from where it can be dragged into the Arrangement.

Transferring files from the DR-8/16 to the PC

Files on any DR-8/16 hard disk can be transferred to your computer's hard disk. No conversion is performed, but you are allowed to select between AIFF and WAVE (Wave) file formats when saving. Proceed as follows:

1. Select Export Audio File from the File pop-up menu in the Pool.
2. Use the DR-8/16 file dialog, to select the "Recorder" (DR-8/16 unit) and hard disk where the file is located.
3. Select the file in the file list and click OK.
A standard Windows Save dialog appears.
4. Specify a disk, a file format and a name, and click OK.
The file is copied, which may take some time. A progress box shows how much of the file has been transferred.

Using the DR-8/16 front panel

Normally, the DR-8/16 front panel is completely disabled. However, if you are used to running your Akai unit from its front panel, there might be things you will prefer to do from there. For a complete list of functions that are candidates for direct DR-8/16 operation (functions that can not be performed from within Cubase), see [page 79](#).

What you shouldn't do!

-
- If you enable the front panel, as described below, you can perform actions on the DR-8/16 front panel that will make Cubase loose contact with the DR-8/16, or which could even ruin your Song data. Therefore do *not* do any of the following:
-
- Load a project.
 - Activate Recording from the DR-8/16 front panel.
 - Perform any editing on the DR-8/16.
 - Perform any disk operations on the DR-8/16, such as Restore, Erase, Format, Cleanup, Minimize or Copy.
 - Change the MIDI-Device ID.
 - Disable sync or change the sync rate.
 - Change the sample rate.
 - Change the record mode.

- Change the Repeat setting.
- Change the in/out points.
- Enable auto punch.
- Enable preroll.
- Enable vari-speed.
- Enable the rehearsal function.

Enabling the DR-8/16 front panel

1. Open the Hardware Setup dialog.
2. Make sure “Enable Front Panel” is activated.
3. If you want to play back from the DR-8/16 transport controls, also make sure “Akai-recorder as remote” is activated.
4. Click OK.

Playing back from the Akai front panel

If “Akai-recorder as remote” is activated, you can use the transport controls on the DR-8/16 for playback. Since Cubase is always synchronized to the DR-8/16, you can then start, stop and locate from either unit, and they will both follow.

Mixing and using EQ

Volume and Pan mixing points

- The volume of any audio channel ("track") can be adjusted in three places:
 - For each event, in the Audio Editor.
 - For each channel, in the Cubase Mixer window.
 - For each channel, in the Monitor window.
- The Pan position of any audio channel ("track") can be adjusted in two places:
 - For each channel, in the Cubase Mixer window.
 - For each channel, in the Monitor window.
- The Send and EQ functions can only be controlled from a Cubase Mixer window.

The following text will describe each of these windows and how they are used in the mixing process.

The Event Volumes in the Audio Editor

As described in the chapter about the Audio Editor in the Audio Recording book, each *Event* can have its own independent volume curve. This allows you to have individual control over the volume of each single Event in your production (including fade in and out), regardless of which audio channel each Event is played back on.

The Mixer Window

The Mixer window provides full control of volumes, panning, effect sends, etc. There are no controls specifically for Muting, but by automating volumes you can achieve the same effect.

Changes made in the Mixer window are applied to each *audio channel* in your system. If you for example Pan a certain channel to the left in the stereo image, all events that play back on this audio channel will appear in the left channel in the mix.

All controls in the Mixer window can be automated, for complete computer controlled mixdown.

The Monitor Window

The Monitor window is probably best used when recording, for quickly setting up a balance between the audio channels. There are only Volume, Pan and Mute settings, and the Monitor window can not be automated. The Mute buttons in the Monitor window can be used as a quick temporary way to silence all output from an audio channel.

Using the standard Mixer Maps

-
- The descriptions below are for systems using just one DR-8/16. If you have more than one unit, see [page 75](#) for information on how to set things up.
-

Setting Up

For a mixer map to be able to control the DR-8/16, it must be set up to react to mixer information via MIDI. The MIDI Control messages used for this must also be in accordance with the corresponding settings in the mixer map:

1. Open the MIDI Mixing Controller dialog.
2. Make sure that MIDI Controller Assignment is activated.

3. If you haven't touched the remaining settings in this dialog you can close it now. Otherwise, please make sure all mixer items use their default controller settings as indicated in the table on [page 74](#).
Please note that if you do not have an EQ board installed in your DR-8/16, some settings will be greyed out.
4. Close the dialog.

Opening up and Trying out mixer maps

1. If you are working from the original "DEF.ALL" Song, select either of the Tracks "DR Mixer" or "DR EQ" depending on which mixer map you want to open.
If you have no EQ board in your DR-8/16, there is no point in selecting the DR EQ Track.
2. Select Edit from the Edit menu.
A Mixer window opens up displaying the mixer map.
3. Make sure the Mixer mode pop-up menu is set to Local.
This is to make sure none of your mixer actions get recorded at this point.
4. Select the "Play" tool (the hand).

5. Try “playing” the different Mixer Objects in the map.
You should note how volumes, Pan, etc. change in the DR-8/16. Also, if Mixer display swapping is activated (see [page 84](#)) the display on the DR-8/16 will indicate the changes graphically.

Snapshots and Recording

Recording mixes is done with the Akai as with any other mixer map. Please see the Recording Mixes section in the chapter about the MIDI Mixer, in the “Getting into the Details” book.

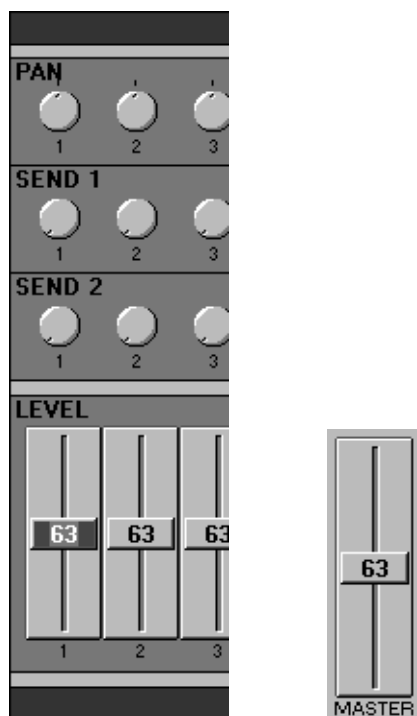
-
- Please note that it is recommended to manually create a Part that spans the entire piece, before you start any recording.
-

The included Mixer maps

The following DR-8/16 Mixer Maps are provided with the program:

DR Mix (File name: "dr.mix")

This Mixer Map is your main mixer. Please note that this is a 16 channel mixer, since the internal mixer in the DR-8/16 has 16 channels although there are only 8 "tracks" to record on in the DR-8. For more information, see your DR-8/16 manual.



The “channel strip” and the master fader in the mixer “DR Mix”.

- The following controls are available on “channel strip”:

Control:	Description:
----------	--------------

Pan	This controls the panning of the channel in the stereo mix.
-----	---

Send 1	This controls the amount of effect send from this channel to the Send 1 output. There are also overall settings for the sends, see page 47 .
--------	--

Send 2	As above but for the Send 2 output.
--------	-------------------------------------

Volume	This controls the output volume for the channel.
--------	--

- The Master volume fader, located at the right side of the map, controls the overall output level from the DR-8/16.

DR EQ Board (File name: "dr_eq.mix")



This is the Mixer map used for adjusting the DR-8/16's built in equalizers. The following controls are available for each of the three bands on each "channel strip" (for details about the EQs, see the Akai documentation):

Control:	Description:
----------	--------------

Freq	The center frequency for the EQ.
------	----------------------------------

Gain	The amount of EQ applied.
------	---------------------------

Q	The width of the frequency band that the EQ operates in.
---	--

DR MIDI Mixer

This is identical to DR Mix, only that it does not use the "Akai MIX" Output, but rather the first regular MIDI Output in your system. See the next page for more info about the differences between various mixer Outputs.

Advanced Mixing Information

The following information is provided for those who have multiple DR-8/16 and for those who want to create their own Mixer Map Objects, or use other methods to control the DR-8/16 from Cubase (for example by inserting events in List Edit).

-
- This information is for advanced users only. You do not need to understand the following to use Cubase Audio and a single DR-8/16 to its full extent.
-

How Cubase controls DR-8/16's mixing and EQ

- Each type of control in the DR-8/16 is accessed via its own MIDI Control Change number. The default settings for this are found on [page 74](#).
- The data is directed to a certain audio channel in the DR-8/16 hardware, via the MIDI channel numbers in the messages.
For example, Control Change 7 (MIDI Volume), on MIDI Channel 3, is used to control the volume of audio channel 3.
- Please note that for a DR-8, only MIDI channels 1 to 8 are valid for direct control of the Akai "track volumes" (Channel 9 to 16 control the "thru mix").

The virtual DR-8/16 MIDI Output vs Direct MIDI Output assignment

With the DR-8/16, a special MIDI Output appears among the regular MIDI Outputs in the Track list, in the Mixer Object dialog etc. This Output is called “AkaiMIX”. This is not a regular MIDI Output at all , but rather a “virtual” MIDI port, that provides the following functionality:

- MIDI Data sent to this output is automatically routed to whatever MIDI Out your DR-8/16 is connected to.
Even if you reconnect your system, the next time you run Cubase, it will find your DR-8/16 and route the MIDI data to it.
- Using this MIDI Output enables the “Mixer Display switching” feature, described on [page 85 in this chapter](#).
This feature is not available when you use a regular MIDI Output.

The MIDI Mixer maps in the DEF.ALL Song use the virtual port. In addition there is a mixer map included in the installation that uses the first MIDI Output in your system, that you can load and modify as desired.

The above means that when creating your own mixers and when entering MIDI data into MIDI Tracks, you can decide to route it to the virtual DR-8/16 port or direct to the MIDI output your DR-8/16 is connected to. So, which should you choose?

- If you have only one DR-8/16, we strongly recommend you to use the “AkaiMIX” port, to make sure your data gets routed correctly.

- If you have several DR-8/16 units, you might need to send data directly to the MIDI Outputs, it depends on your setup, as described on [page 75](#).
- If you are sure of what you are doing, if you do not often repatch your MIDI system and if you do not use the “Mixer Display Swapping” feature, it doesn’t really matter which method you use. Choose the one you feel most comfortable with.

The MIDI Mixing Controller dialog

You can check and even change which controller numbers are used for each control in your Akai unit. Normally you will not want to change this, since it will disrupt the relation between the objects in the Mixer maps and the controllers used for the various mixing function in the DR-8/16. However, for special purposes (and for using multiple DR-8/16 units, see below), this feature is provided. Proceed as follows:

1. Open the MIDI Mixing Controller dialog.
2. Select one of your DR-8/16 units from the Recorder pop-up.
3. Make sure the Active field is checked.
4. Make settings for each Control, and click OK.
 - The Level, Pan, Send and EQ controls are available for each channel as described above.

- The “Master” Control Change number is routed to the master output level of the entire unit. This control should only be used on MIDI Channel 1.

The Default Mixer settings

Below follows a table which lists the default settings for control change messages:

DR-8/16 Function:	Default Controller number in DR-8/16:	Default Controller in Cubase mixers:	Channel range:
Master	13	13	1
Level	7	7	1 to 16*
Pan	10	10	1 to 16*
Send 1	Off	11	1 to 16*
Send 2	Off	12	1 to 16*
EQ Low Freq	Off	14	1 to 16*
EQ Low Gain	Off	15	1 to 16*
EQ Mid Freq	Off	17	1 to 16*
EQ Mid Gain	Off	18	1 to 16*
EQ Mid Q	Off	19	1 to 16*
EQ High Freq	Off	20	1 to 16*
EQ High Gain	Off	21	1 to 16*

* On a DR-8, channels 1 to 8 are directly assigned to Akai "tracks" while channels 9 to 16 control the "Thru Mix".

Mixing with multiple DR-8/16 units

If you have multiple DR-8/16 units you have to create your own mixer maps or at least modify existing ones. The reason for this is that you need to set things up so that the system can differentiate between the different units. You will need to change the MIDI Output and/or the MIDI Controller number assignment. For example you might want to make different mixer maps for each recorder and assign these maps to one Mixer Track each in Cubase.

Multiple units connected to the same MIDI Out

If you have the units connected to the same MIDI Output on your computer, you *must* use the MIDI Mixing Controller dialog to make sure that now two units use the same controller numbers for any function. You must also modify any Mixer maps you plan to use, so that they match the controller numbers as you have set them up in the MIDI Mixing Controller dialog, for each DR-8/16. You can very well use the “AkaiMIX” output for all objects, as long as all recorders use different controller numbering.

Multiple units connected to various MIDI Outputs

If you have the units connected to various MIDI outputs, in any combination, a safe way to make sure they all receive separate MIDI data, is to proceed just as if they were connected to the same Outputs. That is, assign all functions in all units different controller numbers, modify your mixer maps accordingly, and use the “Akai-MIX” outputs for all communication. Cubase will automatically make sure all units receive the data, regardless which MIDI port they are actually connected to.

Multiple units each connected to one MIDI Out

If you have all the units connected to different MIDI Outputs, you can use the method described above. However, can also use *the same controller numbering* (the default one if you wish) in each unit. However, you will then have to make sure that any MIDI data you transmit is sent directly to the correct MIDI Out port for each DR-8/16. In this case, you can *not* use the “AkaiMIX” virtual MIDI port.

Synchronization

Synchronization in Cubase Audio for the DR-8/16 is totally different from using Cubase with an audio card or as a MIDI-only recorder.

- Cubase is *always* synchronized to the DR-8/16 unit you have designated as master.
The settings in the Synchronization dialog and the Sync button on the Transport bar are of no relevance whatsoever, synchronization is automatic and always activated.
- Cubase can transmit MIDI Time Code as well as MIDI Clock messages, even while being synchronized to the DR-8/16. This means you can use a MIDI Out on your computer to sync additional equipment to your Cubase/DR-8/16 system.
See the synchronization chapter in the main Cubase manual and your DR-8/16 documentation for details.
- If you need to synchronize your Cubase/DR-8/16 system to an external device, such as a video tape machine, this is possible, but requires that you have the B-802T SMPTE reader/generator installed in your DR-8/16 master.
Proceed as follows:

1. Open the Hardware Setup dialog from the Audio menu in Cubase and make sure that "AKAI recorder as Remote" is activated.
If you also need change the sync settings on the actual DR-8/16, make sure that "Enable Front panel" is also activated. See [page 58](#) for details.
2. Set up synchronization between the external device and your DR-8/16 master.
See your Akai manual for details on how to do this.
3. Activate play on the external device, and both your DR-8/16 unit(s) and Cubase will synchronize to it.

Cubase DR-8/16 Implementation Reference

In the following text you will find references between functions in the DR-8/16 and their implementation in Cubase. Use this primarily if you have used your DR-8/16 as a stand-alone unit before purchasing Cubase.

Operating Modes

Normal Mode

This is the mode that the DR-8/16 will be in when for normal use with Cubase.

Song Mode

This is not supported, since Cubase always works in a meter and tempo based mode.

Sub-Menu Mode

This is not really supported, since normally you will not use the sub-menus of the DR-8/16 at all, since there are equivalents for practically all of them within Cubase. Currently two exceptions to this rule are: display brightness and some mixer settings, which have to be done directly for the DR-8/16 front panel if required.

Mix Mode

All types of mixing available on the DR-8/16 can be performed (and even automated) from Cubase's Audio Editor, Mixer windows and Monitor window, all without entering Akai Mix Mode at all, see [page 60](#). However, the DR-8/16 can be made to show changes in level and pan settings, see [page 84](#).

Edit Mode

All editing of Audio-Events is done in the Cubase Arrange and Audio Editor windows. The DR-8/16 Edit mode is therefore never used.

Projects

- While Cubase Audio is running a (hidden) DR-8/16 project is maintained, so that no other project in the DR-8/16 is affected by your work in Cubase Audio. This project will be deleted when you quit Cubase Audio.
- If you plan to continue working on a project without Cubase Audio, you can save your Cubase Song on a DR-8/16 disk as a Project file, see [page 91](#).

Recording, Channel Assignments etc.

- The Input Gain Switches and Gain Controls can only be set directly at the DR-8/16 panel, since they are hardware controls that can't be accessed from any external source.

- All types of input routing, including selecting digital inputs and using the Bus function can be controlled from Cubase's Channel Assignment and Input Routing dialogs, see [page 27](#) and [page 27](#).
- You can select any of the DR-8/16 Sample Frequencies, from Cubase's Hardware Setup dialog.
- Recording is done using any of Cubase's normal modes which include manual and automatic punch ins. The tracks selected for recording will be armed and unarmed automatically.
- Punching in/out via a footswitch connected to the DR-8/16 is *not* supported!
- Cubase supports Undo of recordings, you can either select Undo in the Cubase Edit Menu, or simply delete the recorded tracks.
- The Monitor buttons in the Inspector and Monitor windows in Cubase are "remote controls" for the DR-8/16 "Track Rec" function.
- In the same way, the Mute controls in Cubase are equivalents for the "Channel On" functions.
- The DR-8/16 Mute Stop Mode is currently not supported by Cubase Audio, but you can activate this function from the DR-8/16 front panel if you need it.
- Record rehearsal, Destructive Record Mode and the Take functions in the DR-8/16 are currently not supported by Cubase Audio.

Playback and Transport

- All play and “wind” functions are executed from the Cubase Transport Bar.
- The DR-8/16 “locate”, “in”, “out” and “memo points” etc are not directly supported. Instead, Cubase replaces these with the Left and Right Locator, the cue points and various other methods for transport control.
- The special play functions (Over, From) are not supported by Cubase Audio.
- The DR-8/16 Repeat function is replaced by Cubase’s Cycle.
- The DR-8/16 Varispeed function is not supported.

Editing

- Cubase provides full editing and assembly functionality via its Arrange, Audio Editor and Pool windows. The Editing functions provided by the DR-8/16 itself are not used when you run Cubase Audio.

Mixing

- Cubase provides full control over all the main DR-8/16 mixer parameters, via its Audio Editor, Mixer and Monitor windows.
- The Fade and Snapshots functions in the DR-8/16 are not directly supported, but are instead replaced by Cubase’s Mixer window fader automation.

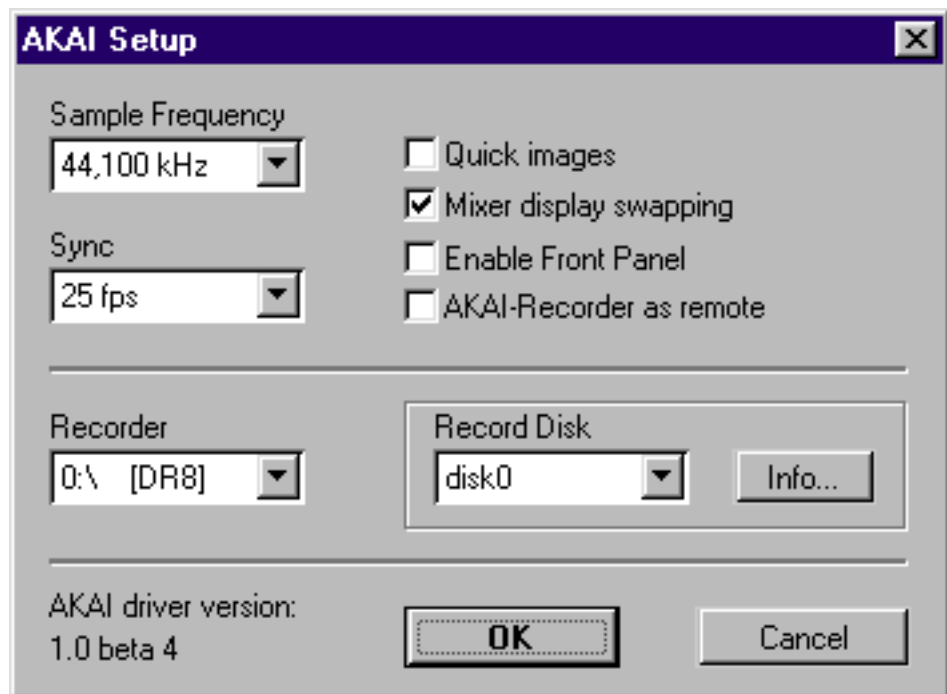
Other

- The time display in the DR-8/16 is always set to Absolute Time (ABS), so that it corresponds to Cubase's time displays.
- The available recording time is displayed in Cubase's Inspector.
- Metering is always set to "Post".
- Pre/Post Metering and Normal/Peak-Hold Metering must be set manually from the DR-8/16 front panel.

Menu and Dialog Reference

This section lists the DR-8/16 specific items on the Audio menu.

Hardware Setup



The Hardware Setup dialog contains a number of settings for the DR-8/16 hardware. See the DR-8/16 manual for more detailed explanations of these functions:

Setting:	Description:
Sample Frequency	The frequency used for recording and playing back audio. The options are 48, 44.1, 32, and 44.056 kHz. See your Akai operation manual for details about which frequency to choose.
Sync	Cubase Audio always synchronizes to the DR-8/16 master recorder via MTC (MIDI Time Code). This is described in detail on page 77 . This field is used to specify the frame rate in the DR-8/16. If you never synchronize your DR-8/16 externally, this setting is of minor importance. However, otherwise this should match the frame rate of the equipment acting as sync master.
Quick images	When this is activated, the data used for the waveform images on screen in Cubase is retrieved directly from the DR-8/16. These images are created quickly but have a low resolution (less detail). When this is deactivated, Cubase creates the waveform images from the actual data on disk. This requires some calculation time after each recording, but ensures high resolution (fine detail).
Mixer display swapping	When this is activated, the DR-8/16 will swap its display from 'level meter' to a mix page whenever mixer data is transmitted from Cubase. Please note that this only works with data transmitted via the virtual MIDI port called "AkaiMIX". See page 70 .

Setting:	Description:
Enable front panel	<p>When this is activated, you can use the DR-8/16 master recorder front panel as if not controlling the unit from Cubase Audio. Please note that there are a number of things you must <i>not</i> do on the DR-8/16 while the front panel is enabled, in order to keep things working" See page 58.</p> <p>When this option is activated, the option 'Akai recorder as remote' will be (automatically) activated.</p>
Akai recorder as remote	<p>When this options is activated, Cubase Audio will react to MIDI Machine Control messages from DR-8/16. Normally it is Cubase that tells the DR-8/16 to start/stop/locate which means it will ignore MIDI Machine Control messages and only sync to MIDI Time Code messages from the DR-8/16. However, if this option is enabled both Cubase and the DR-8/16 can act as MMC masters/slaves. This means that if 'Enable front panel' is activated, as well, you can start/stop/locate from Cubase as well as from the DR-8/16 front panel.</p>
Recorder	<p>This pop-up is used to select one of you your DR-8/16 units, if you have several. This is used in conjunction with the Record disk option, see below.</p>
Record disk	<p>This pop-up is used to select which disk to record on. The setting only affects the DR-8/16 unit selected with the pop-up to the left.</p>

Setting:	Description:
Info	<p>If you click on this button a dialog displaying information about the selected record disk will appear. It displays the following information</p> <p><i>Label:</i> the name of the disk.</p> <p><i>Sectors:</i> The number of physical sectors on the disk.</p> <p><i>Bytes per sector:</i> The physical number of bytes in each sector.</p> <p><i>Total Size:</i> The size of the disk in bytes (Sectors*Bytes per sector).</p> <p><i>Avail. for audio:</i> How much of the total disk space that can be used for audio (when the disk is empty).</p> <p><i>Free for audio:</i> How much of the currently available disk space can be used for audio (the rest has already been used for existing recordings).</p>

MIDI Mixing Controllers

The screenshot shows a dialog box titled "Midi Mixing Controllers" with a standard Windows-style title bar (minimize, maximize, close buttons). The dialog is divided into several sections. At the top, there is a "MIDI-Controller Assignment" section with a checkbox labeled "Active" (which is unchecked) and a dropdown menu currently set to "off" with the word "Master" to its right. Below this is a large area with three columns of controls. The first column on the left has four controls: "Level" (a numeric input field with the value "7"), "Pan" (a numeric input field with the value "10"), "Send 1" (a dropdown menu set to "off"), and "Send 2" (a dropdown menu set to "off"). The second and third columns each have three controls: "EQ Low", "EQ Mid", and "EQ High". Each of these EQ controls has a dropdown menu set to "off" and a label "Freq" to its right. Below the EQ controls, there are three more dropdown menus, each set to "off", with labels "Gain" and "Q" to their right. At the bottom of the dialog, there is a "Recorder" section with a dropdown menu showing "0:\ [DR8]" and a small arrow icon. To the right of the Recorder section are two buttons: "OK" and "Cancel".

Midi Mixing Controllers

MIDI-Controller Assignment ☐ Active off Master

7 Level
10 Pan
off Send 1
off Send 2

EQ Low EQ Mid EQ High

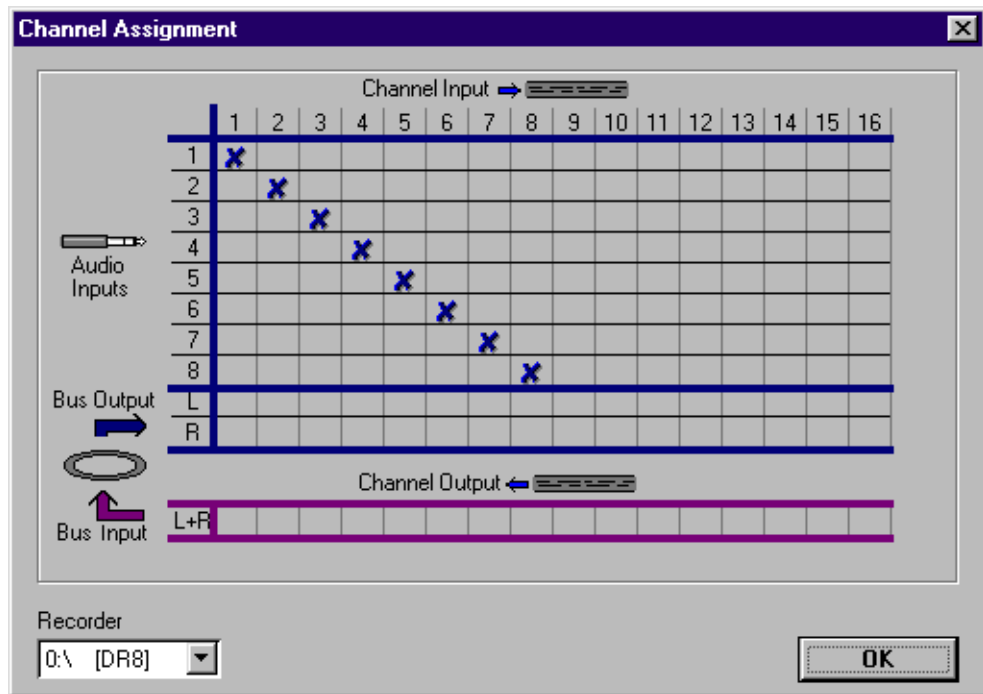
off Freq off Freq off Freq
off Gain off Gain off Gain
off Q off Q off Q

Recorder
0:\ [DR8]

OK Cancel

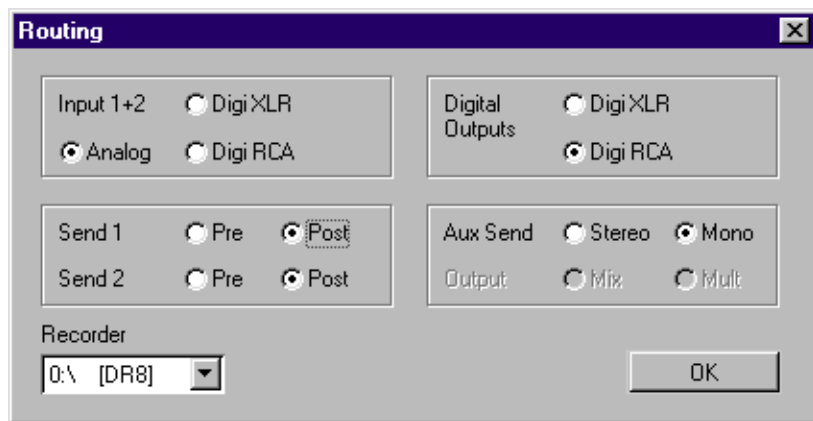
This dialog allows you to set up which MIDI Control Change messages should be used for each Mixing function in each DR-8/16 unit. See [page 70](#) for details.

Channel Assignment



This dialog is used to set up how audio should be routed between inputs, channels and outputs. It is described on [page 27](#).

Routing

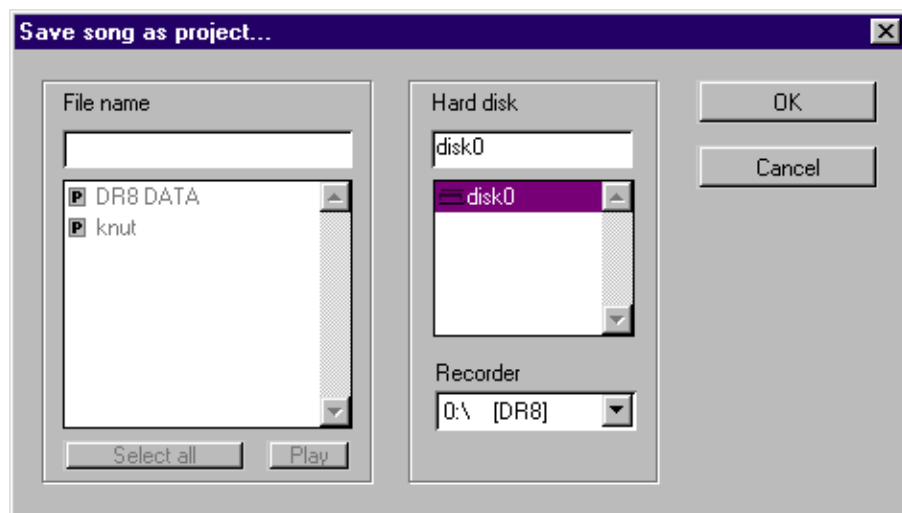


This is used to select various input and output options on the DR-8/16. Since these are all equivalents for settings in the DR-8/16, we ask you to refer to your Akai manual for details:

Option:	Description:
Recorder	Which DR-8/16 unit the settings should affect.
Input 1+2	Which connector is used for input to channel 1 and 2.
Digital Outputs	Which of the two digital outputs that are used.
Send 1 and 2	Determines whether the Send are pre- or post-fader.

Option:	Description:
Aux Send	Determines whether the Aux Send is stereo or mono.
Output	Selects between the two Output modes that are available on the DR-16 only.

Save Song as Project

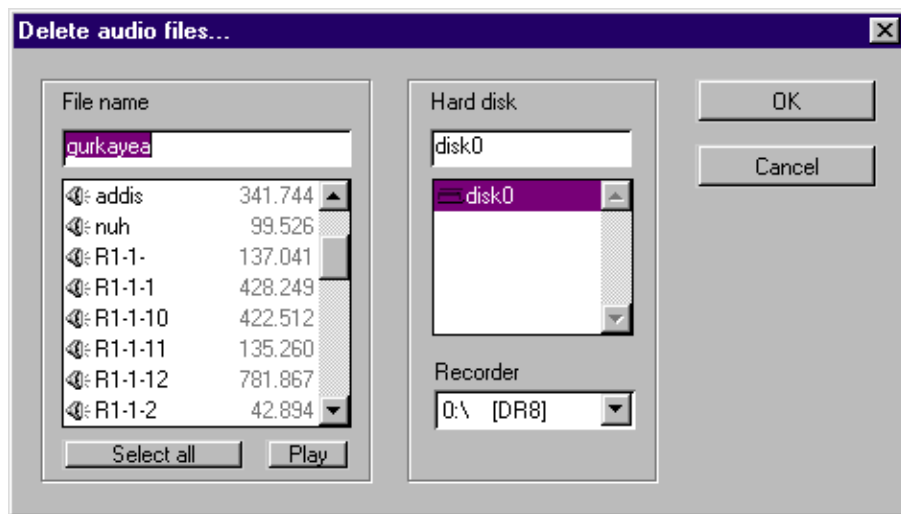


This allows you to save a Song in Cubase as a DR-8/16 project. Using this function you can continue working on the Project from the DR-8/16 front panel, without using Cubase.

-
- Please note that you can not load a Project back into Cubase, this is strictly a “one-way” operation. Furthermore, if you make any changes to the Song in Cubase, these changes are not automatically reflected in the DR-8/16 Project. You must then re-save the Song as a Project.
-

1. Select “Save Song as Project” from the Audio menu.
2. In the dialog that appears select a “Recorder” (DR-8/16 unit) and hard disk from the pop-up menus.
The dialog will now list the current Projects on the disk.
3. Enter a name and click OK.

Delete Audio Files



This is used to permanently delete files from the DR-8/16 hard disk(s).

You can only delete files that are currently *not* used in the Cubase Audio. If you are unsure, please check the Pool to make sure the file you want to delete is not still listed there. Then proceed as follows:

1. Select "Delete Audio Files" from the audio menu.
2. In the dialog that appears select a "Recorder" (DR-8/16 unit) and hard disk from the pop-up menus.

3. Select one or more files from the File list.
4. Click OK.
The program will ask for confirmation that you really want to delete the file(s).

Reinitialize

If you run into problems with your DR-8/16 unit (if it stops working normally) you can use this time to try to restore the unit without quitting Cubase. Proceed as follows:

1. Save your song, preferably under a new name, so that you can go back to the last saved version.
2. Select Reinitialize from the Audio menu and wait for the DR-8/16 to reboot.
3. Check your system.
If things seem to work normally, continue with your work. Otherwise, quit Cubase, boot down both the computer and the DR-8/16(s) and re-start the entire system.

Error Messages

Initialisation Errors (no audio functions will be available)

- SCSI driver not installed properly or too old.
The ASPI manager was not loaded or is too old. If you use Windows 95, the ASPI manager is not loaded if no SCSI devices can be detected on system start-up. This message will then be displayed when you start Cubase Audio.
- No AKAI Recorder found on SCSI Bus!
This message will be displayed when the ASPI manager cannot detect any DR-8/16 on the SCSI bus. Please check if the DR-8/16 is connected properly
- MIDI driver not installed or is disabled! Please check your configuration!
This message will be displayed when no MIDI Output is enabled.
- No MIDI connection to AKAI Recorder! Please check the links!
This message will be displayed when the master recorder hasn't got access to any MIDI In or MIDI Out or if the slave recorders don't have access to any MIDI In. Check all MIDI connections. Also check that the DR-8/16 is behaving normally.

- AKAI Recorder not responding ! Please check that it is switched on !
This message will be displayed when neither a SCSI nor a MIDI connection to the DR-8/16 can be established. The reason for this might be that the DR-8/16 is switched off. This message can possibly also appear if the DR-8/16 has crashed!
- Wrong Operation System in Recorder ! Version 2.00 is required.
This message will be displayed when the operating system in the DR-8/16 is too old.
- Current project name cannot be read; Hard disk data failure; Cannot read transport information; SCSI-B error while reading data.
Cubase could not read some required information from the DR-8/16. There can be a number of reasons for this but please check that the DR-8/16 is behaving normally.
- Cannot create Cubase project file.
This message appears when the temporary project file could not be created.
- Unknown error.
An undocumented error has occurred during initialisation.

File naming error

- XXX is not a valid filename!
This message appears if you type in an invalid file name, see [page 30](#).

Errors on file import

- Wrong file format.
An invalid file was selected for import from the PC to the DR-8/16.
- The file XXX is stored on your computer's hard disk. Do you want Cubase to copy the file to the AKAI-Recorder so that the Song can be opened?
If you load a Song or a Pool file that was created with a different version of Cubase Audio (for example the sound card version) the audio material for the song is on the wrong hard disk. You can then decide if you want to import the files to the DR-8/16 or not.
- The file XXX can not be found! Do you want to locate it and copy it from the PC to the Akai Recorder?
If you load a Song or a Pool file that was created with a different version of Cubase Audio (for example the sound card version) and this file cannot be located, you can try to find it. It will then be copied to the DR-8/16 hard disk.

- The file XXX cannot be found. Do you want to locate it?
If you load a Song or a Pool file and any of its audio files have been deleted, renamed or moved this message will be appear. You know can then try to find the file that is missing.
- The file XXX already exists. Do you want to use this file instead, overwrite it, or specify another name ?"
This message will be displayed if you open a Song or Pool file, get notified that one of the files already exists and select the "Always import on this path " option. You then can decide to use the file stored on DR-8/16 disk, overwrite it or specify a new name.

Errors on deleting files

- Could not delete XXX.
For some reason, a file could not be deleted.
- XXX is currently used by Cubase and cannot be deleted!
You tried to delete a file that is used by Cubase.

Playback errors

- XXX cannot be played on Track X because it resides on a disk connected to recorder #X!
This message appears if you try play a file that is on a hard disk connected to a different DR-8/16 than the one you try to play the file from.
- The AKAI recorder can't handle any more audio events!
You have reached the maximum number of audio events that a DR-8/16 can handle.
- XXX is a stereo file and should not be placed on this channel (X) since it is the last channel of a recorder. The right channel will not be played back!
You have placed a stereo file on the highest numbered track of a recorder, which is not allowed.